

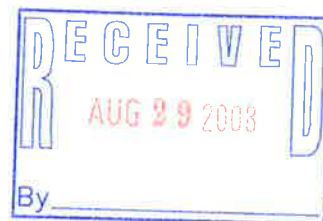


Tennessee Valley Authority
400 W Summit Hill Dr
Knoxville, TN 37902

Janet C. Herrin
Senior Vice-President
River Operations

August 28, 2008

Mr. Jory Becker, P.E.
Kentucky Department for
Environmental Protection
Division of Water
Surface Water Permits Branch
14 Reilly Road
Frankfort, Kentucky 40601



Dear Mr. Becker:

**TENNESSEE VALLEY AUTHORITY (TVA) – KENTUCKY HYDRO PLANT (KYH)
KPDES PERMIT NO. KY0033561 - PERMIT RENEWAL APPLICATION**

Enclosed are two copies of TVA's application for renewal of the subject permit and a check in the amount of \$200 for the application filing fee. The permit renewal application package consists of KPDES Forms 1 and SC, site location and storm water drainage maps, and a water flow schematic. Per your instruction, Form SC is being submitted in lieu of Forms 2C and 2F due to the non-process nature of KYH discharges.

Form SC, Section XII, does not include fecal coliform, total residual chlorine, ammonia, or total organic carbon data for Outfall 002 because these pollutants are not expected to be present in the discharge from the switchyard runoff retention pond. However, as agreed in a recent conversation between you and our consultant, we will provide analyses for these parameters as soon as a storm event yields adequate runoff to cause a discharge from the storm water retention pond.

If you need additional information or would like to arrange a site visit to discuss this application, please contact Alicia Manning at (423) 751-2819 or by e-mail at arlewis@tva.gov.

Sincerely,

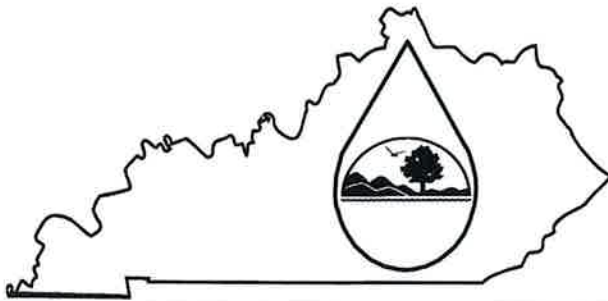
A handwritten signature in black ink that appears to read "Janet C. Herrin".

Janet C. Herrin, P.E.

Enclosures

KPDES FORM 1

11388



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

This is an application to: (check one)

- ☐ Apply for a new permit.
☒ Apply for reissuance of expiring permit.
☐ Apply for a construction permit.
☐ Modify an existing permit.

Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Form SC

For additional information contact:

KPDES Branch (502) 564-3410

\$200.00
Ck.

I. FACILITY LOCATION AND CONTACT INFORMATION		AGENCY USE	0033561
A. Name of Business, Municipality, Company, Etc. Requesting Permit Tennessee Valley Authority			
B. Facility Name and Location		C. Primary Mailing Address (all facility correspondence will be sent to this address). Include owner's mailing address (if different) in D.	
Facility Location Name: Kentucky Hydro Plant		Facility Contact Name and Title: Mr. <input type="checkbox"/> Ms. <input checked="" type="checkbox"/> Alicia L. Manning, River Operations Environmental Program Manager	
Facility Location Address (i.e. street, road, etc., not P.O. Box): 640 Kentucky Dam Road		Mailing Address: 1101 Market St., LP 3D	
Facility Location City, State, Zip Code: Grand Rivers, Kentucky 42045-9164		Mailing City, State, Zip Code: Chattanooga, TN 37402	
D. Owner's name (if not the same as in part A and C):		Facility Contact Telephone Number: (423) 751-2819	
Owner's Mailing Address:		Owner's Telephone Number (if different):	
II. FACILITY DESCRIPTION			
A. Provide a brief description of activities, products, etc: Hydroelectric power generating plant consisting of five (5) generating units capable of producing up to 175 megawatts of electricity.			
B. Standard Industrial Classification (SIC) Code and Description			
Principal SIC Code & Description:	4911 - Electric Services		
Other SIC Codes:			

III. FACILITY LOCATION	
A. Attach a U.S. Geological Survey 7 1/2 minute quadrangle map for the site. (See instructions)	
B. County where facility is located: Livingston	City where facility is located (if applicable): Grand Rivers
C. Body of water receiving discharge: Tennessee River	
D. Facility Site Latitude (degrees, minutes, seconds): 37° 00' 45" N	Facility Site Longitude (degrees, minutes, seconds): 88° 16' 15" W
E. Method used to obtain latitude & longitude (see instructions): GPS and 7.5 min. quadrangle map verification	

IV. OWNER/OPERATOR INFORMATION	
A. Type of Ownership: <input type="checkbox"/> Publicly Owned <input type="checkbox"/> Privately Owned <input type="checkbox"/> State Owned <input type="checkbox"/> Both Public and Private Owned <input checked="" type="checkbox"/> Federally owned	
B. Operator Contact Information (See instructions)	
Name of Treatment Plant Operator: N/A	Telephone Number:
Operator Mailing Address (Street):	
Operator Mailing Address (City, State, Zip Code):	
Is the operator also the owner? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the operator certified? If yes, list certification class and number below. Yes <input type="checkbox"/> No <input type="checkbox"/>
Certification Class:	Certification Number:

V. EXISTING ENVIRONMENTAL PERMITS		
Current NPDES Number: KY0033561	Issue Date of Current Permit: January 1, 2005	Expiration Date of Current Permit: February 28, 2009
Number of Times Permit Reissued: Six (6)	Date of Original Permit Issuance: August 14, 1975	Sludge Disposal Permit Number: N/A
Kentucky DOW Operational Permit #: N/A	Kentucky DSMRE Permit Number(s): N/A	

Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	N/A	N/A
Solid or Special Waste	N/A	N/A
Hazardous Waste - Registration or Permit	N/A	N/A

VI. DISCHARGE MONITORING REPORTS (DMRs)
--

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). Information in this section serves to specifically identify the name and telephone number of the DMR official and the DMR mailing address (if different from the primary mailing address in Section I.C).

A. DMR Official (i.e., the department, office or individual designated as responsible for submitting DMR forms to the Division of Water):	Western Region, Hydro Production Manager
DMR Official Telephone Number:	(270) 362-4318

B. DMR Mailing Address:	
<ul style="list-style-type: none"> Address the Division of Water will use to mail DMR forms (if different from mailing address in Section I.C), or Contact address if another individual, company, laboratory, etc. completes DMRs for you; e.g., contract laboratory address. 	
DMR Mailing Name:	TVA Kentucky Hydro Plant
DMR Mailing Address:	640 Kentucky Dam Road; Route 1 Box 22
DMR Mailing City, State, Zip Code:	Grand Rivers, Kentucky 42045-9164


VII. APPLICATION FILING FEE

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount (for permit renewals, please include the KPDES permit number on the check to ensure proper crediting). Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:	Filing Fee Enclosed:
Non-Process Industry	\$200

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
Mr. <input type="checkbox"/> Ms. <input checked="" type="checkbox"/> Janet C. Herrin, Senior Vice President of River Operations	(865) 632-6770
SIGNATURE	DATE:
	9/29/08

Return completed application form and attachments to: **KPDES Branch, Division of Water, Frankfort Office Park, 14 Reilly Road, Frankfort, KY 40601. Direct questions to: KPDES Branch at (502) 564-3410.**



Janet C. Herrin
Senior Vice-President
River Operations



Tennessee Valley Authority
400 W Summit Hill Dr
Knoxville, TN 37902

October 29, 2008

Mr. William Shane
Kentucky Department for
Environmental Protection
Division of Water
Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

Dear Mr. Shane:

**TENNESSEE VALLEY AUTHORITY (TVA) – KENTUCKY HYDRO PLANT (KYH) -
KPDES PERMIT NO. KY0033561 - PERMIT RENEWAL APPLICATION
AMENDMENT**

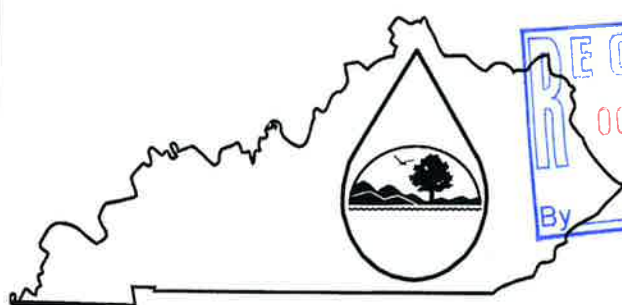
Enclosed are two copies of a revised Form SC and a revised water flow schematic, which should be used to replace those submitted with TVA's August 28, 2008 application for renewal of the subject permit. Form SC, Section XII has been updated to include fecal coliform, total residual chlorine, ammonia, and total organic carbon data for Outfall 002 collected during a recent storm water retention pond discharge. Form SC, Sections IV and XII have also been revised to correct Outfall 001 discharge flow data. The previously reported flows were based on spreadsheet calculations of the combined cooling water and station sump discharges through Outfall 001, and an error was recently discovered in the spreadsheet formula. Additionally, the water flow schematic (Figure 2) has been amended to clarify maximum flow rates for the individual components of the Outfall 001 discharge.

If have any questions about these amendments to the KYH permit application, please contact Alicia Manning at (423) 751-2819 or by e-mail at arlewis@tva.gov.

Sincerely,

Janet C. Herrin, P.E.

Enclosures



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

A complete application consists of this form and Form 1.
For additional information, contact: KPDES Branch, (502) 564-3410.

NAME OF FACILITY: TVA Kentucky Hydro Plant											
I. FACILITY DISCHARGE FREQUENCY				AGENCY USE	0	0	3	3	5	6	1
A. Do discharge(s) occur all year? Yes <input checked="" type="checkbox"/> ¹ No <input checked="" type="checkbox"/> ²				¹ Outfall 001: Daily discharge of non-process water ² Outfall 002: Discharges in response to storm events							
(Complete Item IX for intermittent discharges.)											
B. How many days per week?				Outfall 001: Daily discharge of non-process water Outfall 002: Discharges in response to storm events							
II. A. Give the basis of design for sizing of the wastewater facility (see instructions): See Figures 2 and 3											
B. If new discharger, indicate anticipated discharge date:											
C. Indicate the design capacity of the treatment system:				N/A MGD							

III. Outfall Location (see instructions)

Outfall (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
001	37	00	45	88	16	15	Tennessee River
002	37	01	00	88	16	15	Tennessee River

Method used to obtain latitude/longitude (i.e. GPS unit, USGS topographic map coordinates, etc.)	USGS Map coordinates
---	----------------------

002	<input type="checkbox"/>	Antimony	
	<input type="checkbox"/>	Arsenic	
	<input type="checkbox"/>	Beryllium	
	<input type="checkbox"/>	Cadmium	
	<input type="checkbox"/>	Chromium	
	<input type="checkbox"/>	Aluminum	

<input type="checkbox"/>	Copper	
<input type="checkbox"/>	Lead	
<input type="checkbox"/>	Mercury	
<input type="checkbox"/>	Nickel	
<input type="checkbox"/>	Selenium	
<input checked="" type="checkbox"/>	Barium	0.14 mg/l

<input type="checkbox"/>	Silver	
<input type="checkbox"/>	Thallium	
<input checked="" type="checkbox"/>	Zinc	0.094 mg/l
<input checked="" type="checkbox"/>	Magnesium	5.3 mg/l
<input checked="" type="checkbox"/>	Manganese	0.061 mg/l
<input checked="" type="checkbox"/>	Strontium	0.96 mg/l

IX. INTERMITTENT DISCHARGES (Complete this section for intermittent discharges.)		
A. Number of bypass points:	N/A	(If bypass points are indicated, information below must be completed for each bypass.)

Check when bypass occurs:	<input type="checkbox"/> Wet Weather	<input type="checkbox"/> Dry Weather
Give the number of bypass incidents	per year	per year
Give average duration of bypass	hours	hours
Give average volume per incident		
Give reason why bypass occurs:		

B. Number of Overflow Points:	(If discharge is from an overflow point, the information below must be completed.)	
Check when overflow occurs:	<input type="checkbox"/> Wet Weather	<input type="checkbox"/> Dry Weather
Give the number of overflow incidents:	per year	per year
Give average duration of overflow:	hours	hours
Give average volume per incident:		

C. Number of seasonal discharge points	1 (Outfall 002)
Give the number of times discharge occurs per year	Rainfall dependent
Give the average volume per discharge occurrence	Rainfall dependent
Give the average duration of each discharge	Rainfall volume, duration, and intensity dependent
List month(s) when the discharge occurs	Year round, dependent upon rainfall frequency/duration/intensity

X. AREA SERVED (see instructions)	
NAME	ACTUAL POPULATION SERVED
N/A	
TOTAL POPULATION SERVED	

XII. EFFLUENT CHARACTERISTICS - OUFTALL 002


A. Indicate results of analysis for pollutants listed below.

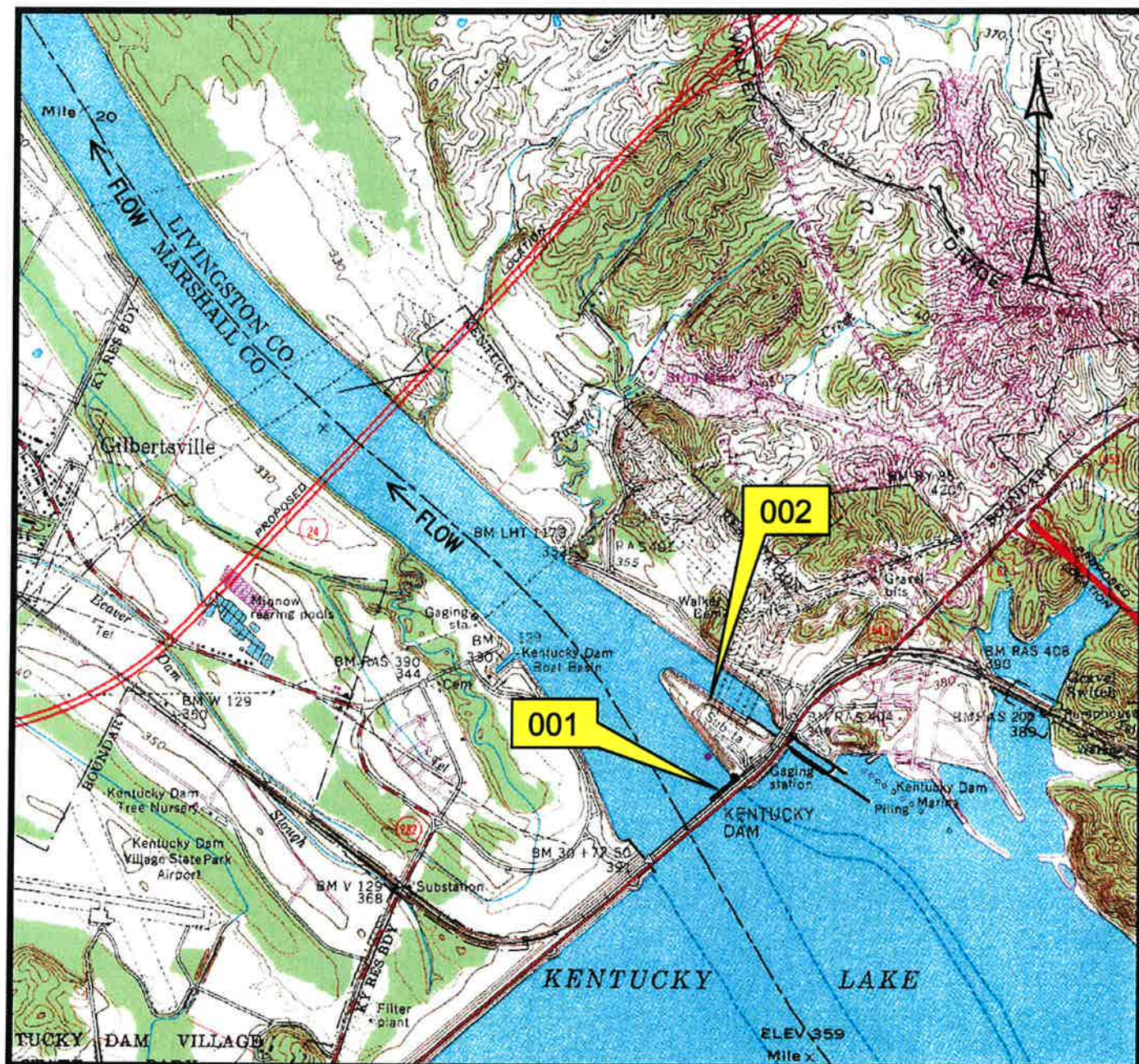
POLLUTANT/PARAMETER	MAX DAILY VALUE	AVG DAILY VALUE	NUMBER OF SAMPLES
BOD ₅	<5.0 mg/l		1
TOTAL SUSPENDED SOLIDS	2.5 mg/l	1.82 mg/l	5
FECAL COLIFORM	92 col/100 ml		1
TOTAL RESIDUAL CHLORINE	< 0.05 mg/l		1
OIL AND GREASE	<5.6 mg/l	<5.4 mg/l	5
CHEMICAL OXYGEN DEMAND	<20 mg/l		1
TOTAL ORGANIC CARBON	9.9 mg/l		1
AMMONIA	< 0.10 mg/l		1
DISCHARGE FLOW	0.013 MGD	0.008 MGD	5
PH	8.58 s.u.	8.01 s.u.	5
TEMPERATURE (WINTER)	N/A		
TEMPERATURE (SUMMER)	26.5 °C		1

B. Frequency and duration of flow: Dependent on rainfall intensity and duration

XIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): Mr. <input type="checkbox"/> Ms. <input checked="" type="checkbox"/> Janet C. Herrin, Senior Vice President of River Operations	TELEPHONE NUMBER (area code and number): (865) 632-6770
SIGNATURE 	DATE 10/29/08



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SCALE: 1"=2000'

Taken from: U.S.G.S.
7.5 Minute Series (Topographic)
Clavert City Quadrangle
1958, Photoinspected 1973



Figure 1 Site Location Map

Tennessee Valley Authority
Kentucky Hydro Plant
Livingston County, Tennessee

Project No. 912-02

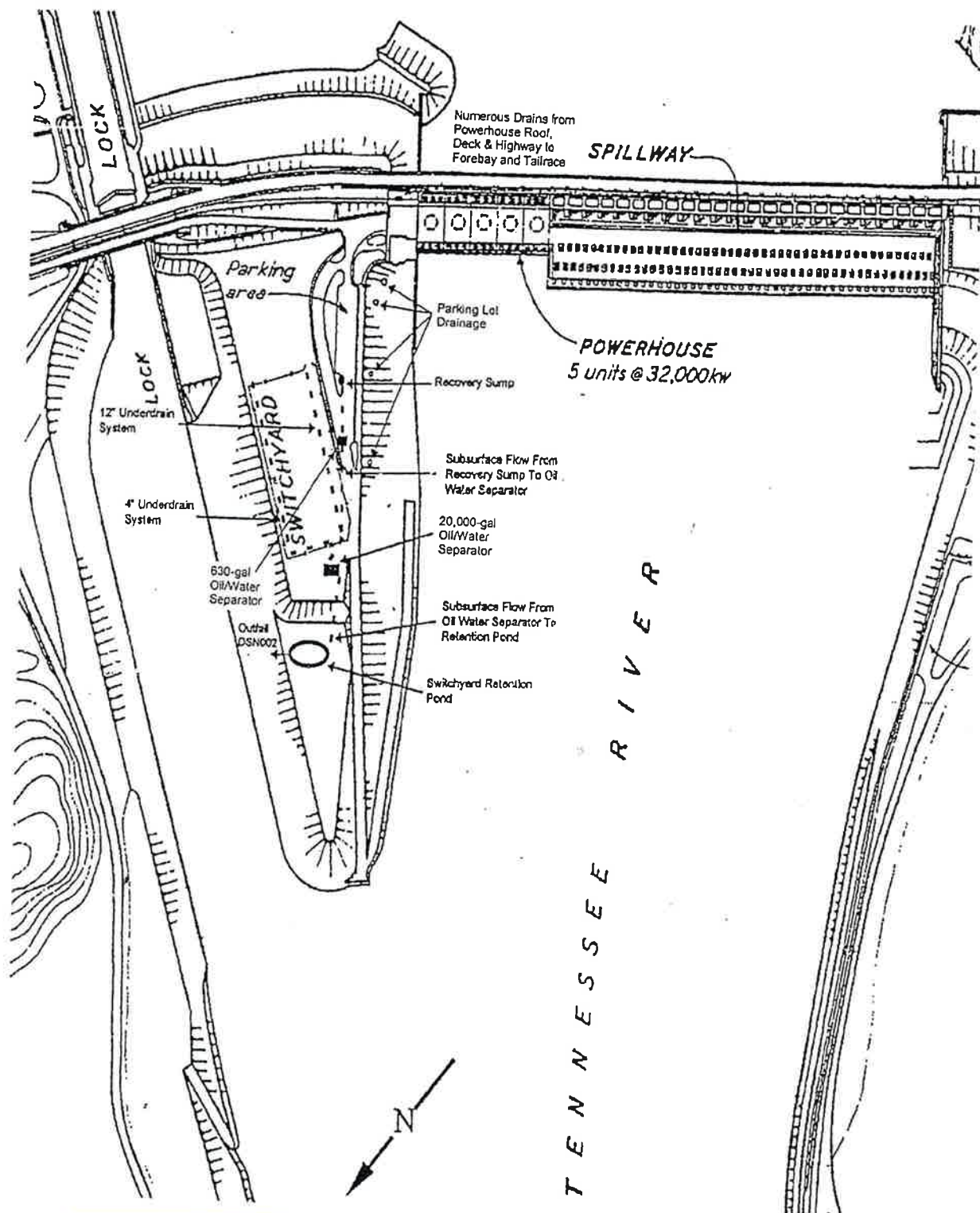
July, 2008

FILE NAME: G: \Enviro\Active\912\912-02\912-02 Fig 1 Topo.dwg



FILE NAME: G: \Enviro\Active\912-02 Flg 2 Schematic Rev Oct 08.dwg

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Figure 3
Stormwater Drainage Map

Tennessee Valley Authority
Kentucky Hydro Plant
Livingston County, Kentucky

Project No. 912-02

July, 2008